

specific arterial anatomy and physiology of the living subject;
[and]

calculating a cerebral flow of the circulatory network
of the living subject based upon the corrected model; and
calculating a cerebral flow of the circulatory network
based upon a selected cerebral flow perturbation.

Claim 6, line 6, after "vessel", insert the words --
using an Attention-Based Model--.

Amend claim 12 as follows:

12. (Once Amended) Apparatus for modeling cerebral
circulation in a living subject, such apparatus comprising:
a [cerebral circulation] pressure and flow model of an
arterial circulatory network for a cerebrum of living subjects in
general;

means for correcting the model of the circulatory
network to substantially conform to [the overall cerebral
physiology] a specific arterial anatomy and physiology of the
living subject; [and]

means for calculating a cerebral flow of the
circulatory network of the living subject based upon the
corrected model; and

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a flow processor adapted to calculate a cerebral flow of the circulatory network of the living subject based upon the corrected model and a cerebral flow of the circulatory network based upon a selected cerebral flow perturbation.

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arterial anatomy and physiology of the living subject;
perturbing the corrected model of the circulatory network;
and
determining a set of flow changes occurring within the
circulatory network as a result of the perturbation.

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40. Apparatus for modeling a surgical alteration of cerebral circulation in a living human subject, such apparatus comprising:
a [cerebral] pressure and flow model of an arterial circulatory network for a cerebrum of living subjects in general;
means for correcting the model of the circulatory network to substantially conform to the cerebral physiology of the living subject;
means for perturbing the corrected model of the circulatory network; and
means for determining a set of flow changes occurring within the model of the circulatory network as a result of the perturbation.

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50. A method of modeling a surgical alteration of circulation in a predetermined region of an arterial circulatory network of a cerebrum of a living human subject, such method comprising the steps of:

[developing] providing a algorithm which defines a pressure and flow model of the [region] arterial circulatory network of the cerebrum for living subjects in general;
correcting the model to substantially conform to [the physiology] a specific arterial anatomy and physiology of the [region of the] living subject;
perturbing a pressure and flow within the predetermined region of the corrected model to simulate the surgical alteration; and